

CHAPTER III

RESEARCH METHODOLOGY

This research was an educational research and development which intended to have an educational product. This was discussed in the subtopic below.

3.1 Research Design

The design for this study is research and development, this mean that the writer would like to develop the appropriate materials, which is used by student of computer engineering and network in SMK NU GRESIK. The appropriate materials here refer to the English reading material needed for computer engineering and network student in SMK NU GRESIK. More specifically the research belongs to developmental study since the writer wants to develop reading material for the learners needs at foreign computer engineering and network student in SMK NU GRESIK.

For developing a good and appropriate materials the researcher must be pass several steps. There are a lot of instructional developments models that can be choose by the researcher for the guidance of developing materials. One of them is using ADDIE Model which stands for analysis, Design, Development, Implementation, and Evaluation.

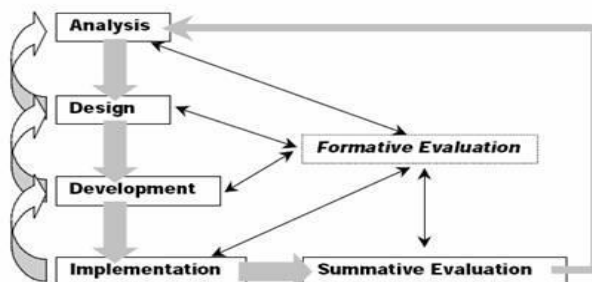


Figure 3.1 Steven J. Mc Griff's ADDIE Model

To make this study more suitable, the researcher used the fix procedure of Research and Development. So, the researcher tries to find the other ADDIE model which has been modified by other researcher. That is modified model in Candra Hadi Asmara (2011). The researcher modified the steps on that model with adding the expert validation step. It is because the researcher is not expert, so the researcher needs to validate the product t the Expert. The modified steps that composed b the researcher are displayed in this following chart:

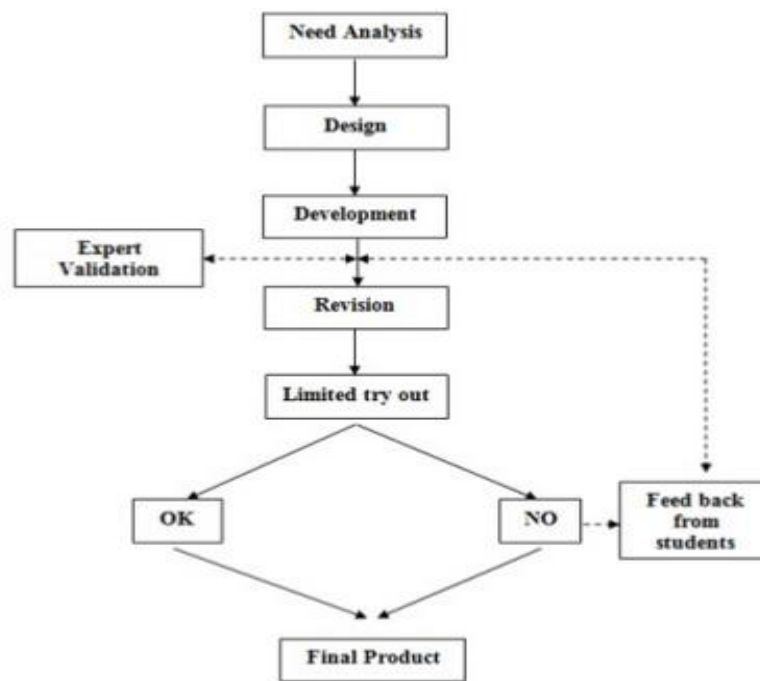


Figure of Candra Hadi Asmara's ADDIE model

This model of research will use in this development study, it will be explained in the procedure of developing reading materials for first semester of computer engineering and network student of 10th grade in SMK NU GRESIK

3.2 Instrument of Data Collection

The researcher used two instruments for collecting the data. The first instrument is interviewing the teacher who teaches the student of computer engineering and network student of

10th grade in SMK NU GRESIK that already done. The second instrument is the questionnaire that will give to computer engineering and network student of 10th grade in SMK NU GRESIK.

3.3 Procedure of Developing Reading Material

For developing good and suitable English reading material the researcher must through the procedure which consisted of Need Analysis, Design Instruction, Development Material, Expert Validation, Development of Validation, Try out of Material, Revision of Material, and the last procedures is Final Product.

3.3.1 Need Analysis

Hutchinson and Waterst (1987) define as lacks can be matched with deficiency analysis. Need analysis used by researcher to gain and identify what skills and knowledge that the learners already have and identify clearly what the learners wish to achieve. This step was divided into two; Target Need and Learning Need. It is important step, before establish the appropriate material for them to be developed. There are two stages to gather need analysis; the first is to know the target needs and the second is to know the learning needs to make the material suitable with the needs and aim of the study.

For the first step, the researcher did the interview and observation with the teacher of computer engineering and network student of 10th grade in SMK NU GRESIK. The researcher get the curriculum which is used by the teacher. It was so surprisely, because the curriculum that the teacher used in that school, is a curriculum like the general high school. Meanwhile, they are the vocational school which need to learn an english language based on their field of study. The researcher also borrowed the handbook from the teacher which is known from the beginning, the material that the student get was general material. It still covered four skills (reading, speaking,

writing, and listening). It obviously did not help the student to understand English language, mostly in reading skill for their field of study.

Considering the problem that was shown up on their school, the researcher needs to know what kind of material that the student needs to learn, and what kind of reading material that they really want to learn. So, the researcher gives questionnaire to 41 computer engineering and network students and interviewing the English teacher.

3.3.1.1 Target Need

The researcher uses several questions to know the target need of the student in studying English reading material, as compulsory subject in SMK NU GRESIK. The question is given to the teacher while the researcher does an interview and given to the students in a questionnaire form.

The researcher did an interview with English teacher. The researcher asked ten questions related with curriculum, material, and media of teaching and learning activities. The material on first semester taught is asked to know the suitable material that will be developed in this study. After getting information from the teacher, the researcher gave the questionnaire for the student. There are twenty questions related to the target need and learning need of reading material for vocational school.

In addition, the researcher also observed the syllabus for the computer engineering and network students which is suitable with their materials on first semester, and also observe their hand books. From syllabus, the researcher could see what is wrong with the material that the student received. So, the job of the researcher is to create the new syllabus based on the target need and learning need which the researcher gets from the questionnaire. It could be the step to develop a good and appropriate reading material for vocational school.

3.3.1.2 Learning Need

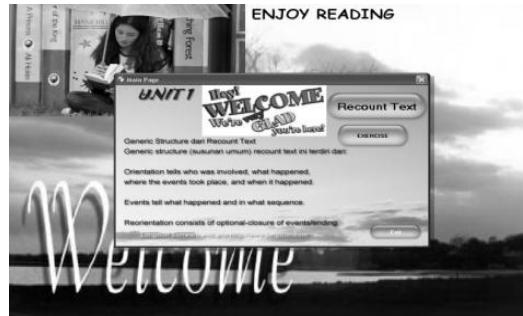
Learning need refers to what the learner needs to study, including learner style of study, learner motivation of study, etc. The researcher also gives the question for the teacher and the student for investigate the learning need. Here, the researcher gave ten questions of the questionnaire for the student to gather the learning need, those are about, what kind of media that they think was interesting for teaching reading, what kind of suitable media that they used on learning English reading skill, their suggestion about fun teaching reading, what kind of exercise that they like related to teaching reading, and etc.

The material should be useful for students' mastery in reading class. Because, all this time they only learn an English reading material using handbook which is contain the general material, and there is no media that the teacher used except the picture. That is why the researcher tries to find the most coming up issue in students by giving the questionnaire to the students. From those ways the researcher knows that recently students like to use personal computer to learn English especially in reading because it is more interesting, attractive, and effective, it is also make them not feel bored while joining in English class.

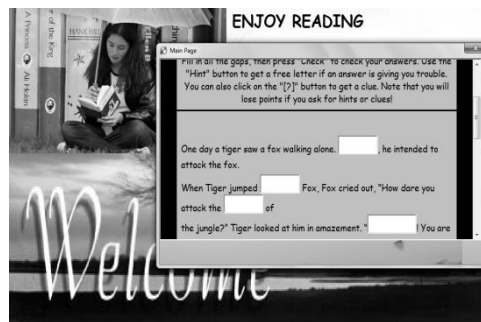
3.3.2 Design Instruction

The researcher will develop the reading material in the form of multimedia CD-ROM. Not only the audio visual materials but also the task compilation of those materials will include to the courseware. The teacher should apply the motivating techniques (Brown, 2001: 258-260). The researcher only develops on English reading skills based on need analysis. The researcher also develop the lesson plan for the guidance of developing her material which appropriate for computer engineering and network students that already check by teacher who teach on English for informatics students for 1st semester. The researcher focuses in reading materials.

- The example of reading CD's



- The example of exercise (a plan)



After the CD-ROM already installed to the computer, the researcher will apply the try out. To make this courseware operate rightly, the learners only need to click the material and practice based on the sub-menu and the list of reading material. The researcher also completes this courseware with note for each reading material, so it will be easier for the teacher to apply this courseware in a large class. In this developing research, the materials take from the syllabus for 1st semester. For each material there will be practices. The reading materials of this courseware conducted from adapting and adopting from many sources, such as www.esi-reading.com and etc. this reading materials has been through the editing section by the researcher to make this reading materials more appropriate for computer engineering and network student in SMK NU GRESIK, the revising actions still continue from the experts.

3.3.3 Development Material

The researcher use multimedia CD-ROM for develops material. This media will give the student a several activities of reading material. The student will get the reading material based on the 1st semester syllabus. The task that will be given by the researcher through this media also different from the text book that the students get from the teacher, beside that this media give the students another entertainment such as pictures, music, and other things.

3.3.4 Expert Validation

After the courseware has been finished, it should be validated to the expert. The experts for this research are the advisors of this developing material research. The expert would get a check list of courseware which consisted of some components: attractiveness, requirements, mechanics, content, and originality, so that the expert could give score and also comment and suggestion to the courseware itself.

3.3.5 Development of Validation

When the expert validation was done, the researcher will pay attention to the score and also comment and suggestion, try to find out which component of the courseware that should be revised or might be develop more. Then, the researcher will begin to revise or develop that component more.

3.3.6 Try Out of Material

After the researcher already finishing her revision or development, she will try the courseware out to the student of computer engineering and network in SMK NU Gresik. This test was in the form of multimedia CD-ROM. In this step the researcher has a purpose to know and check the result of this media weather it could be used as the media in teaching learning activities of reading skills for the student of computer engineering and network in SMK NU Gresik or not. To make this try out running well, the researcher took twelve students randomly

which helped by the teacher. In this section, the researcher conducts many times try out of this media. If the students get the difficulties from the reading material or from the exercises that included in media which given by the researcher, the researcher will try to revise that media until the students, the experts, and the teacher feel suitable on it.

3.3.7 Revision of Material

After the researcher pass the previous step, the researcher already get the suggestion from the expert, so there would be any revision to develop this courseware become more perfect or suitable which completely can be used for student of computer engineering and network in SMK NU GRESIK

3.3.8 Final Product

After having the revision, in the last step of developing this courseware, the final product in the form of multimedia CD-ROM was ready to be applied.